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ABSTRACT

A study investigated whether there were commonalities of cue patterns in six selected tenth grade students' reading and writing that could be discovered from each student's respective language use and perception of the two distinct but interrelated processes. Specifically, the study explored how two above-average readers, two average readers, and two poor readers integrated the three cue systems--graphophonic, syntactic, and semantic--as they read and wrote. Each subject was interviewed about his or her perceptions of the reading and writing processes and then completed an oral reading and a writing task. The findings revealed that the students' conceptualizations of the two processes and their verbalized strategies of language usage in reading and writing closely approximated the observed behaviors in their reading and writing performance. In addition, the students' handling of the three cue systems in writing approximated their processing of and reliance on these cue systems in their reading. The findings also showed that the extent to which a subject could reflect on the nature of the two processes seemed to influence the quality of his or her language performance in both reading and writing. (FL)

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Abstract

Title: A Psycholinguistic Descriptive Analysis of Six Selected Secondary IV Students' Perceptions of the Reading and Writing Processes and Their Language Performance: Case Studies of Above Average, Average and Poor Readers.

Are the conceptualizations of the Reading and Writing processes by six selected Secondary IV subjects reflected in their language performance? Do the cue patterns found in these students' writing samples approximate the cue patterns observed in their oral reading performance?

Investigated whether there are commonalities of cue patterns in six selected adolescents' reading and writing which can be gleaned from each student's respective language use and perception of these two distinct but interrelated processes. The purpose of this study was restricted to an exploratory descriptive case study analysis of how six selected grade 10 subjects (2 above average readers, 2 average readers and 2 poor readers) integrate the three cue systems, graphophonic, syntactic and semantic as they read and as they write.

This study attempted to examine simultaneously adolescent language mastery in reading and in writing on the assumption that despite popular acceptance of an integrated Language Arts curricula (Moffet) existing research indicates a strong propensity among investigators to analyze the processes of reading and writing separately (Page). Grade ten subjects were chosen because of the dearth of available empirical research on and even pilot investigations into adolescent strategies for acquiring knowledge through reading and their strategies for imparting knowledge through writing and because of little research on the varying use of syntactic and semantic anticipation strategies by good and poor readers in the secondary grades. In addition, this grade level is a time period when students are assumed to have developed and mastered language skills and when students have experienced a wide range of reading materials and language instruction.

Major findings include the facts that subjects' conceptualizations of the two processes of reading and writing, and their verbalized strategies of language use in reading and in writing closely approximated observed behaviors in their reading and writing performance; that subjects' handling of the three cue systems in writing closely approximated their processing of these cue systems in their readings of a narrative and poetic passage; that the extent to which a reader can and does reflect on the nature of the reading and writing processes and on his use of language strategies in reading and writing may and does influence the quality of his language performance in both reading and in writing. Very skilled readers and average readers appear to be more cognizant than poor readers (i) of their abilities, their strategies, their limitations, and their goals for self improvement in reading and writing, (ii) of the two processes as meaning centered generative language processes and (iii) of the lack of a theory of English Instruction and adequate instructional activities to facilitate Secondary students' language proficiency in reading and writing. Poor readers seem (i) to have less of a conceptual grasp of the reading and writing processes, (ii) to lack independent and varied strategies for dealing with written discourse (iii) to focus on surface structure concerns of language and on school related activities (such as practice exercises, copying lines, tutors, looking in dictionaries) extrinsic to the reading and writing processes, (iv) to be extremely dependent on observed adult behaviors to guide them in their reading and writing. It could be concluded that poor readers attempt to deal with an abstract and infinite meaning system in concrete and finite terms.

Responses of average readers who include aspects of skills oriented and meaning oriented activities in their models of language in both reading and writing and poor readers who seem to have adopted decoding models of language in reading and imitative models of writing, suggest that present instructional practices in Secondary English classes might be working against the natural process of language comprehension.

Other significant findings indicate that:

(i) The Reading Miscue Inventory and Oral Reading Paradigm may be the most useful instrument and approach to observe the relationship between adolescents' processing of the three cue systems and interpretative strategies in their interactions with literary texts.

(ii) That all subjects exhibited less precision of recall of the poetic passage than the narrative passage. A conspicuous but not surprising finding was that all subjects responded to the two literary texts in more global inferential than precise terms.

(iii) That the effect of oral reading errors may be largely dependent on the type of comprehension desired (atomistic precision or global interpretation), on students' anticipation of the syntactic, semantic, and discourse constraints of literary texts and on students' use of the three cue systems in their writing.

(iv) That there might be a very close relationship between students' oral reading of literature and their performance in generating written discourse. It can be concluded that students do use their knowledge of the world to add to information found in literary texts and to generate information in their own written texts.

It can also be concluded that:

1. An individual's language use in Reading and Writing is patterned and predictable and that further research to investigate the relationship between the interpretative flow and productive flow of adolescent's language use is clearly warranted.

2. That adolescent response to literary texts, the concept of integrated language arts, and language comprehension are still scarcely understood and complex areas which have serious implications for the teacher of English. Case data suggests that the most serious implications for English teachers are:

   (i) the kind of language comprehension they should/can require from adolescents (atomistic precision or global interpretation) in reading and writing;
   (ii) the kind of criterion to be adopted to measure language comprehension in reading and writing;
   (iii) the kind of inferences English teachers can make about the volitional aspects of human language processing; when the language user decided where attention should be turned "What the Mind Must Learn and the Brain Record" (Penfield).

SIX READERS' READING AND WRITING

This study investigated whether there were commonalities of cue patterns in six selected adolescents' reading and writing which could be gleaned from each student's respective language use and perception of these two distinct but interrelated processes. The purpose of the study was restricted to an exploratory descriptive case study analysis of how six selected Grade 10 students, two above average readers, two average readers and two poor readers integrated the three cue systems, graphophonic, syntactic and semantic as they read and write.

Introduction

Language is the defining characteristic of humanity. How human beings organize their minds and use language to relate old and new concepts is central to the reading act and to the writing act (Henry, 1974). Few would dispute the fact that human beings do learn b using language to comprehend it. Some contemporary scholars (Anderson, 1975; Goodman and Goodman, 1978; Halliday, 1975) believe that the prerequisites of acquiring and using knowledge consist primarily of learning how to comprehend, or in Halliday's words, "Learning How to Mean". How language usage is learned and how language comprehension in reading and writing is and/or should be assessed are critical issues in English Education, a field which is characterized at present by a remarkable degree of eclecticism (Kintgen, 1978; Hirsch, Ed., 1977).

Background

Since language comprehension in reading and writing encompasses a large field of study and emerges in many contexts, it is surprising that the idea of the best readers tending to be the best writers has been the subject of a modicum of empirical research. Despite injunctions from reputable documents like the Bullock Report that knowledge about students' language must encompass knowledge about their reading and writing, it is even more surprising that there exists a dearth of empirical research on and even pilot investigations into adolescent strategies for acquiring knowledge through reading and imparting knowledge through writing. In addition, although many well respected scholars over the last 50 years (Richards, 1929, 1942 and Dixon, 1979), argue that it is pedagogically sound to integrate these two areas of languaging, existing research indicates a strong propensity among researchers to analyze the processes of reading and writing separately (Page, 1976).

The ambiguous status of reading and writing comprehension is further complicated by the question of whether the two processes are distinguished by differences in comprehension process or whether reading and writing comprehension is a function of language processing as a whole. The research of Cazden (1972), Clay (1975) and Goodman (1979) suggest that early writing may lead to early reading. Coomber (1975) attributes students' difficulties in apprehending the structure of written materials they read to weaknesses in the development of their writing. Loban's research (1976) bears out the importance of the language experience dictum that "What I Write, I Can Read". Other studies demonstrate a strong relationship between reading comprehension and written syntactic structures as measured by T units (Smith, 1972; Evans, 1972, 1979). Shaughnessy (1977) argues that a writing approach to reading encourages students to become more careful writers and more critical readers. Smith, Hensen, Dillingham (1971) conclude that attitudes and comprehension although not improved are not negatively affected by integrating reading and writing experiences. Hirsch (1977), however, vehemently opposes the subsumption of composition under academic subjects like logic, literature and rhetoric. After an empirical analysis of six graders' reading and writing, Evanicho, Ollila and Armstrong (1974) postulate that since reading and writing are psycholinguistic language processes, it should be possible to identify common elements in the two processes and to enhance overall effectiveness of instruction by focusing on these commonalities.

A respectable body of psycholinguistic research has accrued to support the view that "learning how to mean" is a constructive process in reading and in writing. The majority of scholars accept that meaning is constructed as a result of a cognitive-linguistic interplay between reader and author. Disagreement seems to exist on whether meaning is extrinsic to or intrinsic to text (Olsen, 1977). These differing assumptions about the locus of meaning raises a philosophical and pedagogical problem for the classroom teacher of English: To what degree of precision is/can be/and/or should be human language processing?

To conceptualize meaning as explicitly in the text implies a decoding model of reading and an imitative model of writing. In reading, this model requires students to uncover an explicit representation of the meaning of a text, relying on no tacit premises (Polyani, 1958) or personal interpretations (Richards, 1929). In writing, this construct aims students toward developing an explicit precise conventionalized orthography. In both reading and writing, this view implies an instructional goal of minimizing the ambiguity of words at the graphophonic and semantic level and limiting the meanings readers can legitimately derive from text. The argument that meaning is only incidentally textual (Kolers, 1972; Goodman and Goodman, 1978; Kintgen, 1978) suggests a lack of isomorphism between the external stimulus and its internal representation and a selective application of readers' personal expectations, knowledge of the world and of language to create text. This view also implies that readers possess a general schemata for approaching texts which specify what kinds of things to look for (Anderson, 1977; Kintgen, 1978). This view allows for anomalies or "miscues" (Goodman/Burke, 1972) in language use and for qualitative assessment of the degree of appropriateness of miscues made by language users in reading printed text and generating text.

Growing out of this investigator's observations in English classrooms, experience with adolescents and response to readings in the field of language, literature, reading and writing, the following questions motivated this pilot investigation. 1. If reading and writing are essentially a selection of certain options, lexical, graphic, semantic, syntactic what governs the choices students make? 2. What takes priority in the encoding process? 3. Are the conceptualizations of the reading and writing processes of secondary students reflected in their language performance?

Method

The group sample of six grade 10 subjects was arbitrarily selected by the English Department Chairman of an inner city school in the Metropolitan area of Montreal. Table 1 shows the age of the subjects ranged from 14 years to 16 years. All subjects volunteered to participate in this study.

Table 1

Population Distribution

GRADE	SUBJECT	AGE	SEX	READING STATUS AS PER SCHOOL ASSESSMENT
10	S 1	14	M	Above Average
10	S 2	16	M	Above Average
10	S 3	15	M	Average
10	S 4	16	M	Average
10	S 5	16	F	Below Average
10	S 6	16	F	Below Average

Grade 10 subjects were chosen on the assumption that this grade level is frequently a period when adolescents are thought to have mastered the language skills necessary to exhibit reading and writing competence and when they have experienced a wide range of reading materials and instruction in language. This grade level is characterized in the field of language instruction by a dearth of empirical and even pilot investigations.

Materials

The short story, The Wayfarer, by Robert Coover and the poem, "London", by William Blake were selected as stimulus passages for the subjects' oral reading because they approximated the type of short fiction, poetry and thematic content the majority of Quebec Secondary students would likely have encountered at this stage of their high school career. As a pair, the works deal with a common theme "Man's Inhumanity to Man", but from different points of view and with different rhetorical occasions. As stimulus passages, they are metaphorically suggestive and were viewed as likely to elicit a varied range of responses.

Procedure

Each subject was interviewed about his/her perceptions of the processes of reading and writing, and was tested individually by this investigator. The subjects were given the following information: 1) an explanation of the purpose of this study; 2) an explanation of the structured interview instruments; 3) and directions for their oral reading of the stimulus passages according to the Reading Miscue Inventory Manual (Goodman and Burke, 1972).

Tasks

The subjects were given the following tasks:

(i) ORAL READING:
Each subject was asked to read orally into a tape recorder the short story, The Wayfarer, and the poem, "London". After each oral reading session, the subject was asked to retell in his own words what the particular selection was about. An open ended questioning format was adapted for students who needed help in their retelling. (Goodman/Burke, 1972)

(ii) WRITING:
Each subject was given the following directions. 1) Write about an event, person or idea which interests you; 2) Write about anything you wish; 3) When you have finished your writing assignments, give your writing samples to your teacher. He will tell you what to do next. The teacher who participated in this study was given a copy of the directions to subjects and was instructed that when students approached him with their work to direct the students to edit the sample and/or to hand in a "good copy" to him. Some students were more familiar with the latter terminology. Subjects submitted their drafts and revisions to this investigator. The teacher submitted a portfolio of each subject's writing assignments for the semester to the investigator.

ANALYSIS OF DATA

Since this study was conceptualized as a pilot investigation of a purely speculative venture, an empirical assertion of casuality was unwarranted. Given the nature of the problem to be investigated and the frequent citations in the research literature of the necessity of more in depth case study approaches to language research (Emig, 1971; Graves, 1975; Farr & Weintraub, 1976; Applebee, 1977), a descriptive analysis and case study approach was viewed as a more utilitarian and logical research paradigm than the more traditional statistical correlational and longtitudinal studies.

Structured Interviews--Two structured interviews, "A Reader's View of the Reading Process" (Burke, 1976), "A Writer's View of the Writing Process" (Maguire, 1978) were used to examine subjects' conceptualizations of the two processes. Both interviews consist of 10 questions respectively which were asked of each subject in an individual interview setting. Although the imprecision of these instruments is acknowledged by this investigator, the subjective response format was employed for the following reasons: the open ended nature and conversational style of the questions allow respondents to generate their own information on their reading and writing strategies, on their self assessment as language users, and on teacher and adult influences on the subjects' perceptions of the skills deemed important to attaining language proficiency.

Oral Reading--The tapes of the subjects' oral readings and retellings of the narrative and poem were transcribed and analyzed according to the procedures outlined in the Reading Miscue Manual (Goodman and Burke, 1972). Subjects' retellings were also analyzed according to the Squire categories of literary response (1964).

Writing--The writing samples were analyzed in terms of the following: 1) an holistic evaluation of superior, average and poor writing by an outside evaluator unfamiliar to the students; 2) an assignment of a numerical grade by the outside evaluator as per California Essay Scale; 3) the type of assignment the student chose (reflexive or extensive mode); 4) number of paragraphs and number of T units in each writing sample; 5) selected items from Reading Miscue Inventory (graphophonic anomalies, syntactic deviations and semantic acceptability, loss of meaning).

The data generated from the subjects' interviews, oral readings and writing samples was then analyzed descriptively using a case study paradigm.

Major Findings

Major findings include the facts (i) that subjects' conceptualizations of the two processes and their verbalized strategies of language use in reading and writing closely approximated the observed behaviors in their reading and writing performance. (ii) that subjects' handling of the three cue systems in writing approximated their processing of and/or reliance on these cue systems in their readings (iii) that the extent to which a subject could and did reflect on the nature of the two processes, on his use of language strategies seems to have influenced the quality of his language performance in both reading and writing.

Structured Interviews--Analysis of students' responses to the structured interviews indicate that such instruments, although imprecise with respect to objective scoring, are sensitive instruments and do yield metacognitive information about students' knowledge of their language strategies in reading and writing. Analysis of the results of the RMI and of the writing samples suggest a close approximation between what students perceived as their respective strategies and specific demeanors observed in their performance. Table 2 presents an overview of the metacognitive information with respect to the following areas: 1) model of reading and of writing; 2) language strategies; 3) instructional strategies; 4) adult influences; 5) perception of variance between model of language and school instruction ; 6) self-assessment.

TABLE 2: AN OVERVIEW OF METACOGNITIVE INFORMATION FROM STRUCTURED INTERVIEWS

1. META COGNITIVE INFORMATION	S 1	S 2	S 3	S 4	S 5	S 6
1. Model of Reading Model of Writing	communication & meaning communication & meaning	communication & skills communication speech written	skills & meaning skills & meaning	skills & meaning skills	decoding & skills imitative & skills	decodi skills imitati & skil
2. Language Strategies	independent intrinsic context	independent intrinsic context	dependent independent context	dependent independent content	dependent extrinsic code break-ing	depend extrin code breaki
3. Instructional	intrinsic meaning	code breaking meaning	skills meaning speed	skills meaning speed	decoding skills	decodi skills
4. Adult influences	immediate family	immediate family/ teachers	parents/ teachers	parents/ teachers	peers/ cousins school	peers/ school
5. Perception of variance between Model of Language School practices	yes/high	yes	yes/high	yes	no	no
6. Self concept of Proficiency reading writing	 yes, rapid yes	 yes, rapid yes	 slow, average average	 slow/fair fair	 no yes/no	 no yes/n

Skilled Readers-- The very skilled readers and average readers appear to be more cognizant than poor readers: (i) of language processing in reading and writing as meaning centered generative processes and as a communicative intent between reader and writer; (ii) of their abilities, of use of language strategies intrinsic to the two processes (using context, understanding how words fit together), of their limitations and their goals for self improvement; (iii) of the lack of a theory of English instruction and adequate instructional strategies to facilitate students' language proficiency in reading and writing; (iv) of wide exposure to reading at an early age and of immediate family environment rather than school environment as important factors in successful reading and writing performance.

Poor Readers-- Poor readers seem (i) to have less of a conceptual grasp of the two processes particularly with respect to the difference between composing and answering classroom questions; (ii) to lack independant, varied strategies for dealing with written discourse; (iii) to focus on the surface structure concerns of language, on code breaking activities and on school related activities such as practice exercises, copying lines, looking in dictionaries, activities extrinsic to language processing and which do not actively engage them in language use; (iv) to be extremely dependant on observed adult/peer behaviors to guide them in their reading and writing.

Discussion--One may speculate that poor readers attempt to deal with an abstract infinite meaning system in concrete finite terms. The interesting questions which arise with respect to these secondary students' adoption of a code oriented model of language, is to what extent their adoption of this type of model is due to their lack of ease in using the code and/or adult modeling? Responses of average readers who include aspects of skills oriented and meaning centered activities in their models of reading and writing and poor readers who adopt decoding models of reading and imitative models of writing suggest that present instructional practices in secondary English classrooms might be working against the natural process of language comprehension. It is interesting that the students who perceived language processing within a meaning centered generative framework expressed the strongest disdain of current pedagogical practices and that the dominant instructional strategy advocated by the average and poor readers was skill development.

Other significant findings indicate that the RMI is a sensitive and useful instrument to observe students' processing of the three cue systems and their reconstructions of literary texts. If one is to adopt Kintgen's suggestion of a cognitive base for literary studies, the oral reading paradigm may be the most logical approach to make analysis of covert behaviors less ephemeral. Although the subjective search for variation in cue patterns in readers' transactions with literary texts is at present an inferential process of evaluation, results of this study raise serious doubt as to whether comprehension of literary texts can be actually measured in objective terms.

Table 3 presents an overview of subjects' oral reading performance of the narrative and poem. Above average readers were classified as highly proficient in using language systems, average readers as moderately effective and poor readers as somewhat proficient. These results were consistant with subjects' self assessments in the structured interviews.

TABLE 3: OVERVIEW OF SUBJECTS' ORAL READING PERFORMANCE OF NARRATIVE AND POEM

E OF READING RATEGIES	S 1	S 2	S 3	S 4	S 5	S 6
Reading:RMI Narrative Poem)	rapid/ highly effective	rapid/ highly effective	slow moderately effective	slow moderately effective	slow somewhat effective	slow some
Retelling Score						
Narrative	90	85	70	70	56	38
Poem	80	75	60	60	50	20
Observed Strategies (Narrative & Poem)	varied intrinsic independant	varied/ extrinsic intrinsic independant	varied dependant/ independant	few dependant independant	extrinsic dependant code breaking	extrinsic dependant code breaking
Interpretative Strategies (Squire)	varied	varied	varied/ associational	few	few/ narrational	few/ narrational

Discussion--Good readers demonstrated a variety of interpretative strategies (Squire, 1964) in their oral retellings of both narrative and poem and higher retelling scores than poor readers who exhibited few interpretative strategies and low retelling scores on the poetic passage and the narrative. When readers plodded through texts sentence by sentence and particularly in the case of readers with a decoding model of language, letter by letter, interpretative strategies were used to a minimal degree. The question arises as to whether subjects' lack of precision of recall on the poetic passage results from the type of instruction in reading poetry, from subjects' lack of familiarity with this genre of literature or from the highly embedded structure of figurative language in poetry. There was quick fullfillment of syntactic and semantic expectation in the first two stanzas of London. The less predictable syntactic structures and embedded figurative language in stanzas three and four seemed to impede average and poor readers' attempts to work out an interpretation of these lines.

Table 5 presents subjects' miscue analysis profiles for the narrative in percentage scores.

(PERCENTAGE SCORES)

TABLE 5: READERS' READING MISCUE PROFILES

	S 1	S 2	S 3	S 4	S 5	S 6
Retelling Score	90	85	70	77	56	38
Use of reading strategies	Highly effective	Highly effective	Moderately effective	Moderately effective	Somewhat effective	Somewhat effective
Comprehension Results						
No loss	68	98	48	41	41	47
Parial loss	15	2	32	29	27	18
Loss	17	-	20	30	32	35
Types of errors						
Insertions	3	-	10	5	7	15
Omissions	8	1	20	17	16	10
Substitutions			37	86	86	215
Semantic	9	5	15	34	71	89
Syntactic	4	-	11	14	16	30
Use of cue Systems						
SOUND						
high	57.5	50	62	33	41	35
some	25	50	28	45	51	39
none	17.5	-	10	22	9	27
GRAPHIC						
high	64	50	62	33	41	35
some	17.5	50	32	46	51	39
none	17.5		6	21	9	27
Grammatical function						
identical	85	98	76	78	86	76
indeterminate	-	-	10	9	5	23
different	15	2	14	13	9	21
Grammatical relationships						
strength	73	100	48	41	41	47
partial	17	2	28	27	27	18
weakness	10	-	24	32	32	35
overcorrection						
Total miscues						
sound/graphic	28	6	37	87	202	187
Gram. rel.	39	5	67	109	221	293
regressions	15	14	48	44	47	47

Syntactic and semantic constraints served as important sources of information for all readers as evidenced by their recalls. Results indicate that all subjects were good predictors of grammatical function. The fewest incidence of errors for all subjects were syntactic errors. A high proportion of subjects' miscues conformed to the same grammatical class of the stimulus word. However, it was the use of the syntactic, semantic and discourse constraints simultaneously which characterized the fluent readers. Most of the difficulties of the poor readers seemed to be an inability or lack of awareness of how to make full use of the contextual constraints in both narrative and poem. Syntactic anticipation seemed to be the dominant strategy of the average and poor readers. It would appear that these readers operated on a very strong sense of grammatical acceptability in their interactions with text and tended to reconstruct the syntactic organization of the text rather than semantic content in their recall. The major use of syntactic constraints among the fluent readers was to organize incoming information.

In both texts certain grammatical constructions occured more frequently than others. In the case of the narrative, Coover frequently uses the first person point of view and subject-verb pattern in his sentences. For students who relied on predictable syntax, the following are the most typical examples of sentences the average and poor readers constructed.

Example 1 Expected Response - It could have been impatience
Observed Response - I could have been impatient

Example 2 Expected Response - I ordered him to stare vacantly. I ordered him not under threat of death to focus his eyes. I ordered the blood to flow from his pulpy nose. He obeyed.
Observed Response - I ordered him to stare vacantly. I ordered him not under threat of death to focus his eyes. I ordered the blood to flow from his pulpy nose. I ordered.

It is interesting that the greatest risk taker among the six subjects was the only student who pulled back to self correct this miscue when he encountered an anaphoric reference which was different from the one he had predicted. It was this subject who demonstrated the most precise description of the character polarities operating in the narrative.

Writing

Although results do not include all the possiblities of subjects' use of the three cue systems in the various stages of composing, Table 6 presents some interesting trends in the subjects' writing performance.

TABLE 6

Holistic		average	good	poor	average	poor	aver.
Letter grade	Sample 1	75	70	50	70	45	55
	Sample 2	75	70	50	60	45	55
No. T units	Sample 1	70	55	30	25	27	23
	Sample 2	39	29	38	25	25	23
No. paragraphs	Sample 1	8	6	4	1	2	1
	Sample 2	6	1	4	3	2	2
Mode of writing	Sample 1	reflexive	narrational	reflexive	reflexive	extensive	extensi
	Sample 2	extensive	narrational	extensive	extensive	extensive	extensi
Territory	Sample 1	primary/	secondary	secondary/	primary/	primary	primary
	Sample 2	expanded	secondary	expanded	secondary	secondary	

Outside evaluation indicates that all subjects demonstrated less precision and control of language in writing than in reading. The California Essay grade and holistic assessment lacks precision for this investigator in describing subjects' actual writing strategies. These scales focus on numerical indices of errors rather than causal factors. Analysis of subjects' responses to structured interviews on writing and their writing samples indicate that the very skilled readers (i) conceptualize the process as a meaning centered generative process; (ii) produced more T units per writing sample than less skilled readers; (iii) attempted more syntactic variation in their writing; (iv) tended to be more flexible in selecting a variety of modes and territories for their writing assignments; (v) produced more graphophonic anomalies in their first drafts than poor readers; (vi) needed little rehearsal time during composing; (vii) produced few semantic and syntactic miscues which impeded understanding of their written discourse.

Poor readers and average readers 1) seem to have less of a conceptual grasp of the process of writing. (Average readers appear confused between differences in composing and practice exercises/proof reading while poor readers appeared especially confused between composing and answering classroom questions.) 2) expressed great concern in their structured interview about their difficulties in generating ideational content when composing and also produced small number of T units per sample 3) tended to produce safe simple declarative grammatically acceptable sentences 4) produced few graphophonic anomalies in their first drafts yet focused on spelling and punctuation in their revisions 5) tended to write about primary territory; were less flexible in choosing a variety of modes for their written assignments, and needed much rehearsal time when composing.

A number of interesting questions arise from these findings:

1) Is writing a more abstract form of language processing than reading as Hirsch postulates?
2) A theoretical issue is raised between subjects' profiles in grammatical and semantic knowledge in reading and their ability to generate such knowledge in their writing.
3) The low incidence of T units among less skilled readers also raises some interesting questions.
   Must a student have a schematic image in his head in order to write clearly?
   Is the hierarchial structure of sentence embedding more a matter of linguistic skill than planning?
   Is the code consciousness of the poor readers in reading performance a causal factor in the low incidence of graphophonic anomalies in their writing?
4) Is there a common thrust that runs through a student's concept of language and use of language?

Limitations/Conclusions/Implications

Limitations

This study was an exploratory venture; findings should be considered as tentative speculative indications of adolescent language strategies. Conclusions from this study are limited by the small size of the sample, the arbitrary selection of subjects, by the narrow selection of stimulus passages from the total range available literature, by

the observation and analysis of subjects' writing at one time period. The use of oral recall as an exclusive source of data may have favoured the more verbal students. A free response essay might have produced more importations from the other subjects. The post hoc analysis of data through a case study paradigm was inferential rather than empirical.

Conclusions

One may speculate that the degree to which a student can reflect upon the two processes as meaning centered generative processes and his respective language strategies influences the quality of his performance in reading and writing. A common thread seems to run through students' perception of language and use of language. One may further speculate that the effect of oral reading errors (i) in students' comprehension of literary texts may be dependant on the type of comprehension desired (atomistic precision or global interpretation; (ii) on students' anticipation of the syntactic, semantic and discourse constraints of literary texts and on students' use of these cue systems in their writing. There might be a very close relationship between students' oral reading of literature and their performance in generating written discourse. It can be concluded that students do use their knowledge of the world to add to information in literary texts and to generate information in their own written texts, but precision of meaning construction may be one dimension in which writing differs from reading. It can also be concluded:

1. that further research to investigate the relationship between the interpretative flow and productive flow of adolescents' language use is clearly warranted
2. that adolescent response to literary texts, the concept of integrated language arts and language comprehension are still scarcely understood and complex areas which have serious implications for the teacher of English.

It would be interesting to investigate with more rigor the degree to which an individual's language use in reading and writing is patterned and predictable.

Case study data suggests that the most serious implications for English teachers are

(i) the kind of language comprehension they should/can require from adolescents (atomistic precision or global interpretation) in reading and writing
(ii) the kind of criterion to be adopted to measure language comprehension in reading and writing
(iii) the kind of inferences English teachers can make about the volitional aspects of human language processing; when the language user decides where attention should be turned what the "mind must learn and the brain record" (Penfield, 1975).

Penfield states "if decisions as to the target of conscious attention are made by the mind, then the mind it is that directs the programming of all mechanisms within the brain. A man's mind, one might say, is the person" (1975, p. 61). How should one go about analyzing the language user? Perhaps by observing more closely both the behavior and the person, we may understand more fully the process of teaching and learning of language.

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